ABSTRACT OF THE DISCLOSURE

A plurality of light-emitting diode light sources of the same kind are produced simultaneously. Each light source includes a light-emitting diode chip and a luminescence conversion element, which converts the wavelength of at least part of an electromagnetic radiation emitted by the light-emitting diode chip. In a first process, a layer composite with a light-emitting diode layer sequence applied to a carrier substrate is provided. The wafer is provided with trenches and then inserted into a cavity of a mold. A molding compound, which contains a luminescence conversion material, is driven in, so that the trenches are at least partly filled with the molding compound. The mold is then removed and the light-emitting diode light sources are separated from the layer composite. In a second process, instead of the layer composite, a plurality of light-emitting diode chips which are applied to a common carrier in a regular arrangement are provided.